Engineering Brief No. 50

INFORMATION: Engineering Brief No. 50
Adjustable L-868 Extension

Date: Sept 21, 1994

From: Manager, Engineering and
Specifications Division, AAS-200

To: All Regions and FAA Academy
Attn: Airports Division Managers

Attached is a copy of Engineering Brief No. 50, Adjustable L-868 Extension. This brief describes a new adjustable extension for in-pavement light bases. The extensions may save considerable time in setting in-pavement light bases to the proper elevation following overlay placement. In addition pavement downtime may be significantly reduced.

The purpose of engineering briefs is to inform Airports field offices of new construction materials, methods and products which have been successfully used in limited areas, but are not yet covered by an FAA specification.

Any comments you have concerning this brief will be appreciated. Please advise this office of any installations of this type of extension.

ORIGINAL SIGNED BY:
RICHARD J. WORCH

Richard J. Worch

Attachment

ENGINEERING BRIEF No. 50

ADJUSTABLE L-868 EXTENSION

PURPOSE:
The purpose of this engineering brief is to advise FAA field offices of the availability of an adjustable L-868 light base extension and new style of mud plate.

BACKGROUND:
The construction of overlays on pavements with in-pavement lighting (L-868 fixtures) is slowed by the need to measure, manufacture, and install spacer rings to position the lights at the proper elevation. This is a slow process involving considerable labor. A new adjustable L-868 light has been developed which appears to greatly reduce the time required to set the light bases at the proper elevation. Also a new style of mud plate has been developed which can save time in locating the light base and removing the core. These units were installed at the Greater Pittsburgh Airport in 1992 and have performed satisfactorily. Prior to installation at Pittsburgh, the units were load and torque tested by Professional Service Industries, Inc. of Pittsburgh, PA. The units satisfactorily passed both tests.

DESCRIPTION:
The adjustable light base extension is manufactured from steel and comes in two pieces. The bottom section bolts directly to the top of the existing light base and has a very heavy threaded collar at the top. The upper section has a flat top which closely resembles the plan view drawing of an extension as shown in Figure 12 of AC 150/5345-42C CHG 1. A threaded barrel is welded to the top piece and engages the threaded top of the lower section. The threads are rather coarse and can withstand considerable load. Three set screws located within the threaded barrel prevent rotation once the assembly is set in place.

The new style of mud plate is made of steel and snaps into place with spring clips prior to paving. An adjustable bolt centered in the plate allows the installer to position a heavy steel bolt near the surface of the overlay to be placed. After placement of the pavement, the bolt can be located, partially dug out and used to center the core drill. After coring the bolt can be used to pull out the core plug.

A sketch of the light base and mud plate is included as Figure 1.

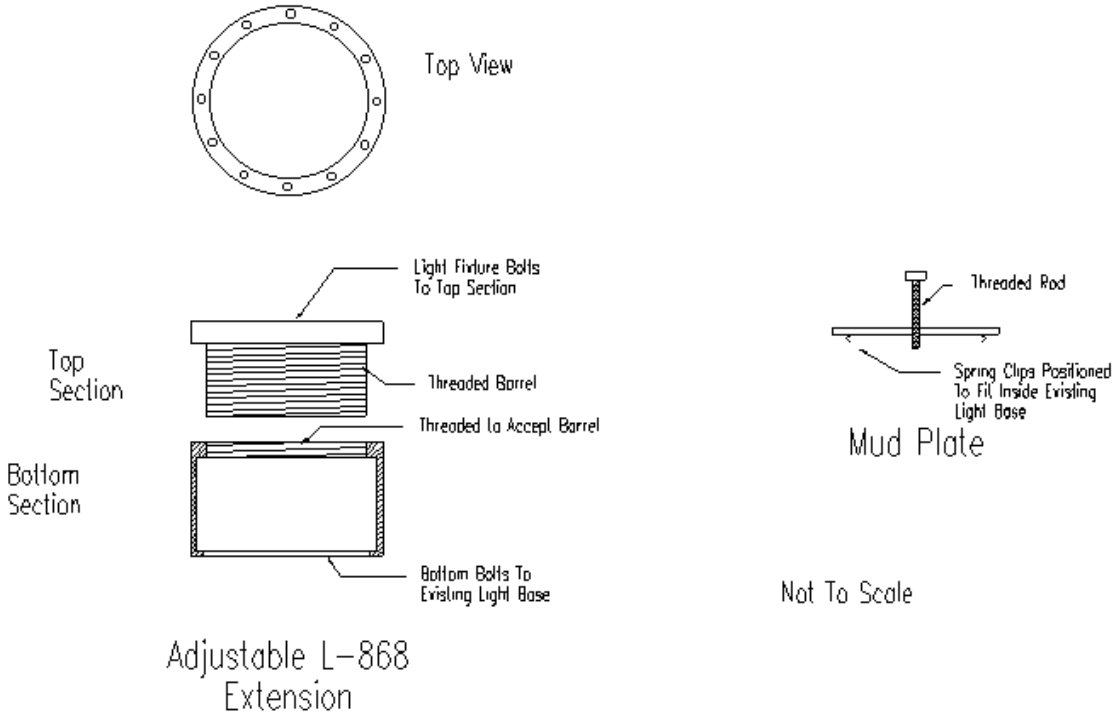

Figure 1

ADVANTAGES:
Considerable time can be saved with adjustable extensions. The time consuming operation of measuring and custom fabricating each extension is eliminated.

COST:
Adjustable extensions are more costly than non-adjustable on a per unit basis. However, overall costs may be less due to reduced pavement down-time and the time saved in installation.

AVAILABILITY:
The new adjustable light bases and mud plates are manufactured by:

Secure Anchoring and Foundation Equipment (SAFE)
639 Butler Street
Pittsburgh, PA 15223
800-837-4774

The manufacturer is investigating the establishment of a distributing agreement with one of the airport lighting manufacturers.

REPORTING:

Each installation of adjustable extensions should be reported to AAS-200.

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Civil Engineer